

IN THE CLAIMS:

The instant amendment cancels claims 1-6, 8-13, and 15-20 and adds claims 21-60.

After the entry of the instant amendment, the claims will be:

Claims 1-20 (cancelled).

21. (new) A method of applying a design, the method operating with an application device having paint application elements, the method comprising:

positioning a stationary component;

receiving first data corresponding to a surface of a building or public or civil engineering work;

generating second data by using the first data and data corresponding to the design;

subsequently, moving the application device on the surface;

measuring a position of a non-stationary component relative to the stationary component, the non-stationary component being attached to the application device;

measuring a movement of the application device if the step of measuring a position is unable to provide valid position data; and

controlling the paint application elements by selecting a portion of the second data, the portion selected being determined by the measuring steps, to apply paint on the surface, wherein paint is not applied at positions that have already been fully painted in accordance with the second data.

22. (new) The method of claim 21, wherein measuring a position includes using a measuring method based on linear propagation of light or sound between the non-stationary component and the stationary component.

23. (new) The method of claim 21, wherein measuring a position includes measuring based on angles or wave propagation time between the non-stationary component and the stationary component.

24. (new) The method of claim 21, wherein measuring a position includes using a camera or a light- or laser-source or a reflecting or absorbing landmarks or a visual feature or position sensitive device (PSD).

25. (new) The method of claim 21, wherein measuring a position includes measuring according to an Inside-Out method, or, according to an Outside-In method.

26. (new) The method of claim 21, wherein measuring movement includes measuring a linear or rotational velocity, or a linear or rotational acceleration.

27. (new) The method of claim 21, further including

 recording an image of a portion of the surface by using a scanner or camera attached to the application unit; and

 extracting position relevant features from the recorded image, the features including visual features of previously applied paint or a reference pattern or structural features.

28. (new) The method of claim 21, further including measuring movement of the application device, if due to an insufficient measurement rate or disturbed intervisibility between the non-stationary component and the stationary component the step of measuring a position is unable to provide valid position data.

29. (new) The method of claim 21, wherein, if within a region of the surface the step of measuring a position is unable to provide valid position data due to disturbed intervisibility, paint in this region is applied by moving the application device from a point of valid position into that region, whereby the position of the paint application elements is determined by the step of measuring movement.

30. (new) The method of claim 21, wherein messages are generated for an operator, the messages indicating, if the step of measuring a position has available a valid position or

not.

31. (new) The method of claim 21, wherein paint application is suppressed, if the position could not be evaluated sufficiently exact.

32. (new) The method of claim 21, wherein the application device is moved manually, by an autonomous robot or by cable.

33. (new) The method of claim 21, wherein the application device is maintained in contact with the surface by use of a rolling or sliding element.

34. (new) The method of claim 21, wherein application of paint beside a region containing previously applied wet paint is performed by moving the application device alongside the region such that a number of paint application elements laterally protrude over the rolling or sliding element and overlap this region.

35. (new) The method of claim 21, wherein the paint application elements employ methods of compressed air spraying, air mix spraying, supercritical spraying, hot spraying or drop on demand methods.

36. (new) The method of claim 21, wherein different coating materials are applied by the application device in parallel, the coating materials including a ground coat, a conversion coat or a fixing coat.

37. (new) The method of claim 21, wherein controlling the paint application elements includes taking into account that, due to the movement of the paint application device, the position of a paint application element is located in movement direction by the amount of a position offset ahead a measured real time position of the paint application element.

38. (new) The method of claim 21, wherein geometric properties of the surface are

recorded using the stationary component.

39. (new) The method of claim 21 wherein measuring a position of a non-stationary component relative to the stationary component further includes

measuring positions of the non-stationary component relative to a plurality of stationary components.

40. (new) The method of claim 21 further including generating the first data by measuring a physical characteristic of the surface.

41. (new) The method of claim 39 wherein generating the second data includes compensating for features on the surface.

42. (new) The method of claim 21 further including generating the first data by measuring a color of the surface.

43. (new) The method of claim 41 wherein generating the second data includes compensating for colors on the surface.

44. (new) The method of claim 21, wherein positioning a stationary component comprises positioning the stationary component in a way allowing the position of the non-stationary component to be measured relative to the stationary component within only a subportion of the surface.

45. (new) A system for applying a design to a surface, comprising:
an application device comprising

- a member configured to be in contact with the surface;
- an array of paint application elements, laterally protruding over the member;
- a positioning system comprising
 - a first measuring system which measures the position of a non-

stationary component of the measuring system attached to the application-device relative to a stationary component of the measuring system, and

a movement sensor attached to the application device, the movement sensor being employed for sensing the position, if the first measuring system is unable to provide valid position data due to an inherently insufficient measurement rate or due to disturbed intervisibility between relevant components of the first measuring system;

- a paint reservoir; and
- a control unit, which controls the paint application elements based on positions measured, based on a color assignment and based on the history of paint application at the positions of the paint application elements.

46. (new) The system of claim 45, the positioning system further comprising a scanner or camera attached to the application device for generating additional position information by recording an image of a portion of the surface below the application device and by extracting position relevant features from the image recorded.

47. (new) The system of claim 45, the movement sensor being a linear or rotational velocity sensor, or a linear or rotational acceleration sensor or an image sensor, which records a small portion of the surface.

48. (new) A method of applying a design to a surface, the method operating with an application device having paint application elements, the method comprising:

- receiving first data corresponding to the surface;
- generating second data by using the first data and data corresponding to the design;
- moving the application device on the surface;
- detecting a position of the application device; and
- controlling the paint application elements by selecting a portion of the second data in accordance with the detected position, to apply paint on the surface.

49. (new) The method of claim 48 further including generating the first data by measuring a physical characteristic of the surface.
50. (new) The method of claim 48 further including generating the first data by measuring a color of the surface.
51. (new) The method of claim 50 wherein generating the second data includes compensating for colors on the surface.
52. (new) The method of claim 48 further including
 positioning a component at a first position;
 generating the first data by measuring a physical characteristic of the surface while the component is at the first position,
wherein detecting a position of the application device includes detecting the position relative to the component while the component is at the first position.
53. (new) The method of claim 48 wherein the surface is on a building or public or civil engineering work.
54. (new) The method of claim 48 wherein the surface is on a building or public or civil engineering work, and the method further includes
 detecting a movement of the application device, and
wherein selecting the portion of the second data includes
 selecting in accordance with the detected movement.
55. (new) The method of claim 48 wherein the surface is on a building or public or civil engineering work, and the method further includes
 detecting a movement of the application device, and
wherein selecting the portion of the second data includes
 selecting in accordance with the detected movement at a time when the step of

detecting a position is inoperative.

56. (new) The method of claim 48 wherein generating the second data includes generating to compensate for a feature on the surface.

57. (new) The method of claim 48 further including generating the first data using a photoelectric transducer.

58. (new) The method of claim 48 further including
generating the first data using a photoelectric transducer, the first data including color information, wherein the step of generating the second data includes
generating the second data to include color information.

59. (new) The method of claim 48 further including
generating the first data before the controlling step; and
generating the first data after the controlling step, thereby effecting a quality control.

60. (new) The method of claim 48 further including
generating the first data before the controlling step and after the controlling step,
to continuously generate the second data, thereby effecting a quality control.